

Benefits of control, managerial ownership, and the stock returns of acquiring firms

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This article examines how the benefits to managers of corporate control affect the relationship between managerial ownership and the stock returns of acquiring firms. At low levels of managerial ownership, agency costs of equity (such as perquisite consumption) reduce acquirer returns. At high levels of managerial ownership, managers enjoy nonassignable private benefits of control that they would lose if they sold their ownership stake. These benefits of control are increasing in the managerial ownership stake. Examining mergers between 1985 and 1991, we find evidence of a nonmonotonic relationship between the returns earned by acquirers and their managerial ownership level.

1. Introduction

■ Beginning with Berle and Means (1932), the issue of whether managers maximize shareholder wealth has generated considerable debate. Rather than maximizing shareholder wealth, managers may maximize their own utility, through either the consumption of perquisites (as in Jensen and Meckling (1976)) or the selection of less-risky investment projects (as in Amihud and Lev (1981)). Managerial ownership acts as an incentive for managers to align their interests with the shareholder's interests. Accordingly, under these theories, more ownership in the hands of managers leads to greater equity value. The monotonicity of this relationship has recently been questioned. For example, Mørck, Shleifer, and Vishny (1988) find that value is also adversely affected at high levels of managerial ownership, as managers are entrenched and free from the discipline of their shareholders. Consequently, value first increases and then decreases with increases in the managerial ownership

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stake.¹ This nonmonotonic relationship has been confirmed by McConnell and Servaes (1990) and Hermalin and Weisbach (1991).²

These articles have examined the relationship between managerial ownership and value (as captured by Tobin's q). We examine one aspect of this relationship: specifically, do managers who own less in the firm tend to "overpay" when they acquire a target firm? Accordingly, this article focuses on the relationship between the managerial ownership stake in acquiring firms and the size of the premiums that these managers offer in an acquisition. As Shleifer and Vishny (1988) state in their review of the literature,

Ironically, the literature that focused on takeovers as devices to eliminate non-value-maximizing behavior has almost forgotten the bidders, despite the fact that acquisitions may be the most important decisions about the allocation of corporate wealth that managers make. Acquisitions, especially friendly ones, may provide managers their greatest opportunity for expressing their non-value-maximizing preferences. . . . For them, the purchase of other companies at inflated prices may be the grandest deviation from value-maximization (pp. 13-15).

Therefore, the relationship between the premium paid and the managerial ownership stake is an important (non-)value-maximizing activity to be examined.

Under the traditional aligned-interest hypothesis, managers indulge in any non-value-maximizing transaction, such as excessive consumption of perquisites or sub-optimal risk-taking activities, when they do not have a significant ownership stake in the firm. As the managerial stake in the firm increases, managers' interests become more aligned with those of the shareholders, resulting in the managers' consuming a lower level of perquisites and reporting larger earnings to shareholders. Thus, under the aligned-interest hypothesis, a negative relationship is proposed between the percentage of stock owned by managers and the bid premium offered. Evidence in support of this hypothesis is found in Lewellen, Loderer, and Rosenfeld (1985), and You et al. (1986). They find that firms that had lower managerial ownership levels earned lower abnormal returns.³

Under the above hypothesis, it would be optimal for the shareholders of the firm to increase the managers' ownership stake. This would result in a higher value of the firm due to an increasing convergence between manager and shareholder interests. However, at high levels of managerial ownership, the managers begin to hold a large undiversified financial portfolio in the firm. Will the managers use the financial markets to reduce the risk of their financial portfolio? Are there certain benefits of control that the managers would have to surrender if they sold their ownership stake in the firm? These are some of the questions not addressed by the aligned-interest hypothesis.

As an alternative, we propose the diversification-control hypothesis. It focuses on the impact on the bid premium of the private benefits of control to the managers. Under the diversification-control hypothesis, firms in which managers do not initially possess a significant ownership stake indulge in non-value-maximizing activities. With increases in managerial stockholdings, the interests of the managers

¹ To assess the effects of managerial share ownership on shareholder value (measured by Tobin's q), Mørck, Shleifer, and Vishny estimated a piecewise-linear specification in ownership levels (using cross-sectional data). We describe their results in detail in Section 3.

² McConnell and Servaes (1990) find an inverted U-shaped relationship, which is quadratic in managerial ownership. Hermalin and Weisbach (1991) also find that shareholder value increases and then decreases with each increase in the managerial ownership stake.

³ If stock prices reflect available information, then offering high bid premiums should cause the acquirer's abnormal returns to fall. Therefore, throughout this article we shall use bid premiums and abnormal returns interchangeably (with the reminder that bid premiums and abnormal returns are negatively related to each other).

become more compatible with shareholder interests, resulting in a negative relationship between the bid premium and the managerial equity stake. But at sufficiently high levels of managerial ownership, the managers (who could now be classified as significant shareholders) begin to hold a large nondiversified financial portfolio in the firm. The managers do not sell their stake in financial markets, as they want to retain the benefits of controlling the firm. If managers value control, their incentive to diversify their nondiversified financial portfolio increases as their managerial stake increases. Further, these benefits of control are increasing in their managerial ownership stake, resulting in the managers offering a higher bid premium even when they own a significant part of the firm. Thus, the diversification-control hypothesis suggests a negative relationship between the bid premium and the managerial ownership stake at low values of managerial ownership, and a positive relationship at high levels of managerial ownership.

Incomplete contracting is the key element in such an approach. First we describe models of perquisite consumption by the manager as private action and hence noncontractable.⁴ At high ownership stakes, managers also enjoy private benefits of control. These benefits of control are available only to the party in control and are contractually nonassignable and hence noncontractable. Here, however, more managerial ownership causes managers to have more private benefits of control. We treat perquisite consumption and benefits of control distinctly from each other. Although the two have common aspects, one can think of benefits of control as the residual rights of ownership and perquisite consumption as the unobservable non-value-maximizing activity in which managers indulge (see, e.g., Jensen and Meckling (1976) and Holmström (1979)). More important, managers do not need ownership to consume perquisites but earn the private benefits of control through the acquisition of an ownership stake.⁵

The key implication of the diversification-control hypothesis is the nonmonotonic relationship between the bid premium and the acquirer's managerial ownership stake. That is, managers of acquiring firms pay high bid premiums when their ownership stake is low (attributable to unobservable perquisite consumption) and when their ownership stake is high (due to private benefits of control). We examine empirically this relationship between the bid premium and the acquirer's managerial ownership level. We use the fact that bid premiums (the price paid for the target company) are inversely related to the returns earned by the acquirer. Consequently, empirical support for the diversification-control hypothesis is provided if the abnormal returns first increase and then decrease as the acquirer's managerial ownership level increases. We examine 172 mergers taking place in the years 1985 to 1991 and find strong evidence in support of this relationship.

Section 2 describes the diversification-control hypothesis. In Section 3 we discuss the data used and the results of an event study to test the hypothesis (i.e., whether the abnormal returns first increase and then decrease as the managerial ownership stake in the acquiring firm increases). Section 4 provides our conclusions and possible directions for future research.

2. The diversification-control hypothesis

■ We begin with the premise that the right to control a large corporation is valuable (see, e.g., Grossman and Hart (1988), Harris and Raviv (1988), and Diamond (1990)).

⁴ This private action is unobservable by the shareholders and is assumed to be perquisite consumption (see Jensen and Meckling, 1976). We could also assume other unobservable actions, such as managers' diversifying their human capital invested in the firm (see Amihud and Lev, 1981; Mayers, 1972).

⁵ One might interpret the benefits of control (at high levels of managerial ownership) as the degree of control that the manager has over the board. Companies with high managerial ownership levels and CEOs with longer tenure tend to have a high number of insiders on the board (see Hermalin and Weisbach, 1988) and consequently enjoy high benefits of control.

Such benefits of control are available to the party in control and cannot be contracted away to other agents, including securityholders (Grossman and Hart, 1982, 1988). Examples include discretion over the choice of investment projects, control over the appointment of members of the board of directors, extension of the tenure of the chief executive officer, returns to firm-specific investments in human capital, synergy with other projects managed by incumbents, reputational effects from managing a large firm successfully, and so on. Harris and Raviv (1988) argue that the market value of the firm reflects only the firm's cash flows, as "competition among passive investors will drive the market price to the present value of the cash flows net of the benefits of control" (p. 61). The incumbent management team receives the benefits of control, which is terminated in the event of a takeover or bankruptcy.

Empirical evidence suggests that there are benefits of control that allow different valuation of stocks with different voting rights. For example, U.S. Securities and Exchange Commission (1987) examines 26 OTC and AMEX firms having dual-class stock, concluding that low-vote common stock trades at a discount of 4% to 5%. Lease, McConnell, and Mikkelsen (1983) examine 30 firms having dual-class stock, and show that voting stock trades on average at a premium from 1% to 7%. DeAngelo and DeAngelo (1985) examine 45 firms with dual-class stock and find that management and family insiders control 57% of the voting rights and only 24% of the common stock cash flows. They also find that dual-class structures often confer substantial voting powers on incumbent management. In their study of 63 negotiated block trades, Barclay and Holderness (1989) find premiums averaging 19.7% over the postannouncement exchange-quoted price. These private benefits of control increase at an increasing rate with fractional ownership, and the total dollar value of benefits increases with firm size. These studies suggest that the right to control a firm is valuable and often rests with the current management of the firm.

Using the logic of recent models of corporate control, we describe intuitively the implications of the diversification-control hypothesis.⁶ To represent "benefits of control," we allow the monetary value of these private benefits of control to be nondecreasing in the managerial ownership stake; further, we assume that managers have a concave utility function over perquisite consumption. In this problem, incentive compatibility determines an optimal fraction of the firm's shares owned by the manager and an accompanying level of perquisite consumption. Following standard principal-agent arguments, the optimal sharing rule from solving this sequential program will not be Pareto optimal.

How does the managerial ownership stake affect the bid that an acquiring firm is willing to pay for a target firm? Three effects are at work. First, at low levels of ownership, managers are willing to pay a high bid premium in order to facilitate additional perquisite consumption. In this context the bid premium falls as the managerial ownership stake increases. A second channel relates to gains from diversification. Because the manager's wealth is not fully diversified, when there are gains to diversification (i.e., when the cash flows of the acquiring firm and the target firm are imperfectly correlated), the bid premium rises as the managerial ownership stake increases. Third, the private benefits of control cause the bid premium to rise with the managerial ownership stake. Given

⁶ In Hubbard and Palia (1995) we use a single-period principal-agent model to motivate the relationships studied in this article. This model has three salient features. First, a "manager" is given a certain fraction of the firm's outstanding shares, with the balance of shares held by the representative risk-neutral shareholder. Second, managers receive the monetary value of private benefits of control. Third, the manager has a concave utility function over perquisite consumption.

that private benefits of control increase with the managerial ownership stake, the managers indulge their benefits of control and offer a high bid premium.⁷

On the one hand, at low levels of the managerial ownership stake, the first channel dominates the second and third, resulting in a negative relationship between the bid premium and the managerial ownership stake. On the other hand, at high levels of the managerial ownership stake, the second and third channels dominate, so that there is a positive relationship between the bid premium and the managerial ownership stake. Hence the diversification-control hypothesis predicts a nonmonotonic relationship between the bid premium and the managerial ownership stake: At low values of the managerial ownership stake, one should find a negative relationship between the bid premium and the managerial ownership stake, and at high levels of managerial ownership, one should find a positive relationship.

A few caveats about this prediction are necessary. First, we do not examine why mergers take place; we only describe the relationship between the managerial ownership levels and the bid premium. Hence, mergers may take place at both high and low levels of managerial ownership. Second, we assume that acquisitions are financed entirely through internal funds. We do not examine how the capital structure decision affects the stock returns of acquirers. Jensen (1986), Harris and Raviv (1988), and Grossman and Hart (1988) have shown that debt constrains managerial control. However, Mørck, Shleifer, and Vishny (1988) and McConnell and Servaes (1990) find an increasing, and then decreasing, relationship between shareholder value (Tobin's q) and managerial ownership, while controlling for debt as a separate independent variable. Therefore, debt does not appear to affect the nonmonotonic relationship between shareholder value and managerial ownership. Consequently, we do not explicitly include the choice of debt or external equity in the financing of the acquisition. Third, we do not account for all aspects of the portfolio decision of managers. For example, managers might diversify their financial risk in the firm by using other instruments available in the financial markets. If they sell their stake in the firm, however, they lose the benefits of control. Consequently, we describe a simple portfolio decision of a wealth-constrained manager rather than explicitly including the relationship that his stake in the firm has to other securities he holds. These restrictions allow us to focus explicitly on the relationship between the bid premium and the acquiring firm's managerial ownership level in a simple and empirically testable fashion.

We now turn to tests of the central prediction of the diversification-control hypothesis: that the bid premiums (or, conversely, the abnormal returns) are first decreasing then increasing (are first increasing then decreasing) when managerial ownership levels increase.

3. Empirical tests and results

■ **Data description.** We obtained a list of mergers and acquisitions by examining the relevant issues of *Mergers and Acquisitions* for the years 1985 through 1991. *Mergers and Acquisitions* lists the names of the acquiring and target firms and the year the merger took place. We then combined these data with the actual date of announcement of the merger, where the announcement date is the date the merger is first mentioned in the *Wall Street Journal Index*. Subsequently, different issues of the *Wall Street Journal* that are referenced in the *Index* are used to ascertain whether the acquisition was a merger or a tender offer, and whether the medium of payment was cash, acquirer stock, or a combination of acquirer stock and cash. We then combined these data with

⁷ Hubbard and Palia (1995) show that (1) for low levels of managerial ownership, the level of perquisites consumed by the manager is decreasing in the managerial ownership stake and (2) the bid premium in acquisitions first increases then decreases in the managerial ownership stake.

daily stock return data. The stock return data for acquiring firms (for the period 1983 through 1992) were obtained from the daily returns file of the Center for Research in Security Prices (CRSP). This sample consists of 354 mergers undertaken during the years 1985 through 1991, for which we had complete daily return data and which were announced in the *Wall Street Journal*.

The managerial ownership data consist of the fraction of stock owned by managers in the year preceding the year of acquisition, and were obtained from the proxy statements filed with the Securities and Exchange Commission (SEC). We also collected the four-digit SIC codes of each line of business in which the firm operates from *Dun and Bradstreet's Million Dollar Directory* (MDD). MDD lists the six major lines of business of a company, which we gathered in the year preceding the acquisition year. To examine the ownership of large shareholders, we collected information on the fraction of stock owned by shareholders with more than 5% ownership in the company. These data were obtained from the proxy statements filed with the SEC in the year preceding the acquisition year. Other financial data, such as the asset size of acquiring and target firms, were obtained from Compustat. We use the value-weighted market portfolio (including dividends) obtained from CRSP as the relevant market index.

□ **Results.** We begin our empirical tests by estimating the abnormal returns earned by acquiring firms and testing their level of significance using the event-study methodology described in Dodd and Warner (1983). We use an event window of four days before the announcement of the merger to four days after the announcement date ($[-4, +4]$).

The return-generating process for stock i during time t is given by

$$R_{it} = \alpha_i + \beta_i R_{mt} + e_{it}$$

where R_{it} is the return for stock i at time t ,

R_{mt} is the return on the market (as proxied by the CRSP value-weighted market index) at time t ,

α_i is the OLS estimate of the intercept of the market model regression, and

β_i is the OLS estimate of the slope coefficient of the market model regression.

We estimate this equation for the 100 days before the event window (namely, $[-104, -5]$) by regressing R_{it} on R_{mt} and obtaining the OLS estimates α_i and β_i . We sum over the prediction errors so as to average out the nonsystematic factors not related to the merger announcement: $A_i = (1/N) \sum_{t=-104}^{-5} A_{it}$, where $A_{it} = R_{it} - \alpha_i - \beta_i R_{mt}$. The nine-day cumulative abnormal return $CAR[-4, +4]$ for the event window is $CAR(-4, +4) = \sum_{t=-4}^{+4} A_{it}$. The standardized prediction error is given by $SPE_{it} = A_{it}/S_{it}$.

where

$$S_{it} = \left[s_i^2 \left[1 + \frac{1}{100} + \frac{(R_{mt} - \bar{R}_{mt})^2}{\sum_{t=-104}^{-5} (R_{mt} - \bar{R}_{mt})^2} \right] \right]^{1/2}$$

and the residual variance $s_i^2 = (1/98) \sum_{t=-104}^{-5} A_{it}^2$. The test statistic for the nine-day cumulative return is unit-normal and is $Z = \bar{W}_i \sqrt{N}$, where $\bar{W}_i = (1/N) \sum_{t=-4}^{+4} W_{it}$ and $W_{it} = \sum_{t=-4}^{+4} SPE_{it} / 5$.

The results of the event study are reported in Table 1. The average nine-day abnormal return is $-.45\%$, with an associated z -statistic of -2.82 . These results indicate that acquirers experience small but statistically significant decreases in share value upon

announcement of a merger. Our results are consistent with the studies described in Jensen and Ruback (1983) and Jarrell, Brickley, and Netter (1988), who find nonpositive abnormal returns for successful acquirers.

We now turn to tests of the relationship between the acquirer's abnormal returns and the level of managerial ownership. Hence, we employ the cross-sectional estimation methodology of Eckbo, Maksimovic, and Williams (1990), using the nine-day abnormal returns obtained above as our dependent variable. Eckbo, Maksimovic, and Williams assume that all acquisitions are value maximizing, whereas our hypothesis assumes that all differences in the bid premiums (and conversely the abnormal returns) are due to managerial agency costs. Accordingly, we employ Eckbo, Maksimovic, and Williams' truncated regression technique, including only firms that experienced negative abnormal returns. The inclusion of firms with agency problems results in a sample of 172 firms. Table 2 presents the sampling distribution for managerial ownership and large ownership levels. We find that the mean managerial ownership level is 7.2%, with a large percentage of acquirers (68% of our sample) having less than 5% managerial ownership levels. The mean ownership level for large shareholders is 11.9%.

To examine the relationship between managerial ownership and the abnormal returns, we construct three dummy variables first used by Mørck, Shleifer, and Vishny (1988). Specifically,

- $M1$ = managerial ownership level if managerial ownership level $<.05$,
= .05 if managerial ownership $\geq .05$;
- $M2$ = 0 if managerial ownership level $<.05$,
= managerial ownership level minus .05 if $.05 \leq$ managerial ownership level $<.25$,
= .20 if managerial ownership $\geq .25$;
- $M3$ = 0 if managerial ownership level $<.25$,
= managerial ownership level minus .25 if managerial ownership $\geq .25$.

We estimate three specifications using Eckbo, Maksimovic, and Williams' truncated regression methodology, the results of which are given in Table 3. The first specification shows that abnormal returns first increase when managerial ownership levels increase to 5% and then decrease thereafter. These results are consistent with our prediction. In the next specification we include the large-shareholder variable (*LARGE*) in the spirit of Shleifer and Vishny (1986), who suggest that large shareholders have a greater incentive to monitor managers, resulting in a higher firm value. *LARGE* is defined as the fraction of stock owned by shareholders with more than 5% ownership in the company in the year preceding the acquisition, and it is found to be statistically insignificant. More important, including *LARGE* does not change the sign or significance of the managerial-ownership variables. We also control for differences in the relative size of the acquiring and target firms (see Asquith, Bruner, and Mullins (1983)). We construct the relative size variables *SIZE*, defined as the logarithm of the ratio of the acquirer's market value of equity to the target's market value of equity. Many of the target firms were missing from Compustat, resulting in a reduced sample of 93 firms. Hence, this third specification has a lower goodness of fit (likelihood function of 311.5) than the first two specifications, making the results of this specification less robust. We find *SIZE* to be statistically insignificant, with no major effect on the managerial ownership variables. Consequently, the truncated regression results support an increasing and then decreasing relationship between abnormal returns and managerial ownership levels, consistent with the diversification-control hypothesis.

Comparing our results with those of Mørck, Shleifer, and Vishny (1988), we obtain similar findings in the 5% and 5%–25% managerial ownership range. However, we find that acquirers with higher than 25% managerial ownership levels earn slightly

TABLE 1 Daily Abnormal Returns Earned by Acquiring Firms
(Sample of 354 firms)

Daily Abnormal Returns				
Day	Mean	t-statistic	Median	Percentage of Abnormal Returns Positive
-4	.0016	1.303	.0001	50.56
-3	.0015	1.323	.0008	53.10
-2	.0024	1.904	.0001	50.56
-1	-.0030	-2.635*	-.0020	44.63
0	-.0022	-3.214*	-.0021	44.63
+1	-.0017	-.423	-.0022	44.35
+2	-.0012	.049	-.0010	47.74
+3	-.0002	-.051	-.0008	47.18
+4	-.0017	-1.072	-.0018	43.79
Cumulative Abnormal Returns (CAR)				
	Mean	z-statistic	Percentage of Abnormal Returns Positive	
Cumulative abnormal returns [-4, +4]	-0.0045	-2.816*	47.39	

* Statistically significant at the 1% level.

TABLE 2 Sample Distribution of Managerial and Large Shareholder Ownership Levels

Managerial Ownership		Large Shareholder Ownership	
Ownership Levels (percent)	Number of Firms	Ownership Levels (percent)	Number of Firms
0 to 5	117	0 to 5*	92
5 to 10	21	5 to 10	21
10 to 15	10	10 to 15	10
15 to 20	8	15 to 20	7
20 to 25	5	20 to 25	16
25 to 30	0	25 to 30	10
30 to 35	2	30 to 35	1
35 to 40	3	35 to 40	1
40 to 45	1	40 to 45	2
45 to 50	1	45 to 50	3
50 to 55	0	50 to 55	0
55 to 60	0	55 to 60	2
60 to 65	1	60 to 65	2
65 to 80	3	65 to 90	5

* The large shareholder ownership data are obtained from the firm's proxy statement, which shows all shareholders with more than 5% ownership. A number of firms had no shareholder owning more than 5% of the firm.

TABLE 3 Truncated Regression Results:
Diversification-Control Hypothesis

Variable	(1)	(2)	(3)
<i>CONSTANT</i>	-.0035 (.0050)	-.0026 (.0054)	.0034 (.0083)
<i>M1</i>	.7786 (.2920)*	.7659 (.3031)**	.3309 (.1671)**
<i>M2</i>	-.2170 (.0866)**	-.2233 (.0897)**	-.1609 (.0958)***
<i>M3</i>	-.0383 (.0416)	-.0396 (.0424)	-.0047 (.0898)
<i>LARGE</i>	—	.0116 (.0189)	.0068 (.0049)
<i>SIZE</i>	—	—	.0009 (.0019)
Number of firms	172	169	93
Likelihood function	573.02	565.20	311.50

Standard errors are in parentheses.

* Statistically significant at the 1% level.

** Statistically significant at the 5% level.

*** Statistically significant at the 10% level.

negative abnormal returns, although this relationship is not statistically significant. Mørck, Shleifer, and Vishny find a positive relationship between Tobin's q and managerial ownership for firms with managerial ownership levels greater than 25%. However, they find this relationship to be less significant when managerial ownership levels are below 25%. Consequently, our results are generally similar to theirs; we note two caveats, however: Mørck, Shleifer, and Vishny use board ownership levels, while we use managerial ownership levels, and their dependent variable is Tobin's q , while we use the nine-day abnormal return of acquiring firms.

An implication of the diversification-control hypothesis described in Section 2 is that acquiring firms with high levels of managerial ownership are more likely to indulge in diversifying acquisitions. We investigate this possibility in Table 4. We create a dummy variable *SIC*, which takes the value of unity when the acquiring and target firm share a three-digit SIC code.⁸ We split the sample into two subsamples: the first includes acquiring firms with ownership levels less than 5%, and the second includes acquiring firms with managerial ownership levels greater than 5%. We find that acquiring firms with ownership levels greater than 5% indeed performed diversifying acquisitions, and this difference is statistically significant at the 10% level. This result supports the diversification-control hypothesis. In addition, a collateral prediction of the diversification-control hypothesis is that managers with high levels of ownership do not like to lose control and will consequently offer cash as their preferred medium of exchange in a merger. To explore this prediction, we create two dummy variables. The first equals unity if the medium of payment is cash, and the second equals unity if the medium of payment is stock; both dummy variables equal zero if the medium of payment is a combination of cash and stock. Note that the subsample of acquirers with low levels of managerial ownership tend to offer equity (rather than cash) more often than the subsample with high managerial ownership levels, although the difference between the two is statistically insignificant. This medium-of-exchange result does not provide additional support for the diversification-control hypothesis.

⁸ The SIC code for holding companies (6711) is not treated as a separate line of business.

TABLE 4 Differences in Low and High Managerial Ownership Firms

Variable	Subsample of Firms with Managerial Ownership Levels <5%	Subsample of Firms with Managerial Ownership Levels >5%	t-statistic
Dummy for whether the merger was a related acquisition	.596	.500	1.68*
Dummy for whether the medium of exchange in the merger was cash only	.424	.308	1.05
Dummy for whether the medium of exchange in the merger was stock only	.389	.346	.38

* Statistically significant at the 10% level.

4. Conclusions

■ In this article we address whether acquiring firms in which managers are significant shareholders behave differently in a merger from acquiring firms in which managers do not own a significant stake. Our hypothesis suggests that managers in acquiring firms indulge in non-value-maximizing activities such as perquisite consumption when managerial ownership is low. As the managerial stake increases, the interests of managers become more aligned with shareholder interests. This results in a negative relationship between the bid premium and managerial ownership. At sufficiently high levels of managerial ownership, however, the managers begin to hold a large nondiversified financial portfolio in the firm. As the managers value control, they are unwilling to sell their stake in financial markets. These benefits of control are increasing in the managerial ownership stake and can lead managers to pay a high bid premium even when they own a substantial fraction of the firm. Accordingly, managers of acquiring firms overpay when their ownership stake is low (attributable to unobservable perquisite consumption) and when their ownership stake is high (reflecting their private benefits of control). Thus, we hypothesize a negative relationship between the bid premium and the managerial ownership stake at low values of managerial ownership and a positive relationship at high level of managerial ownership. Given that bid premiums and abnormal returns are negatively related, we find strong evidence that the acquirer's abnormal returns first increase and then decrease when its managerial ownership levels increase.

We have implicitly assumed that the financing decision of the acquisition is irrelevant, as the firm has sufficient internal funds for the merger. An interesting question is how the issuance of debt or external equity might alter our conclusions. For example, debt limits managerial discretion relative to external equity finance. Does this difference lead firms with a lower managerial ownership stake to use more debt and overpay more? Further, is the risk higher for those firms in which managers have stock option plans? We shall address these issues in future research.

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